efforts on local levels and will be available to communities that previously could not afford computer mapping data. Universities, businesses and citizens will also have access to the maps.

The 2005 Orthophotography Project is being paid for primarily through state and local homeland security grants. Aerial data acquisition began in late February 2005; program completion occurs when all geospatial products are delivered by March 2006. In addition to 1'- and 6"-pixel-resolution natural-color digital orthophotography, products will include "true" orthophotography (without distortion caused by feature displacement, such as building lean) over the downtown sections of major metropolitan areas, color-infrared orthophotography, a digital surface model, and a digital elevation model.

*For more information contact Dr. Jill Saligoe-Simmel, Executive Director, Indiana Geographic Information Council, Inc., via email at: jsaligoe@iupui.edu.*

# Enterpise GIS in Utah

*By Matt Peters and Dennis Goreham, State of Utah*

GIS technology realized tremendous growth within Utah's State and local government agencies over the past two decades. Many levels of government embrace this technology as a tool to be more responsive, efficient, and effective. Yet, without coordination of effort and well-defined, common goals, the potential exists for unnecessary duplication of data, incorrect or incomplete decisions, and lost opportunities for enhancing the quality of government.

The Utah Automated Geographic Reference Center (AGRC) is the agency of the State of Utah responsible for the implementation and promotion of Geographic Information Systems (GIS). AGRC has created and maintains the State Geographic Information Database (SGID). This database contains a variety of geospatial information, comprising over 300 layers, including transportation, hydrology, taxing entities, and land ownership.

There are many participants in the data creation process, including local and county governments, the Federal government, and other State agencies. This cooperation is possible because of a data sharing Memorandum of Understanding, signed by the Governor of the State of Utah and more than 13 Federal agencies, in May of 2004.

SGID data is stored in a Relational Database Management System (RDBMS), utilizing Environmental Systems Research Institute (ESRI), ArcSDE, and is available to the public and other State and local agencies. Utah, designating ESRI products as the standard in 1987, has realized many advantages in its data collection and manipulation efforts.

The realization of cooperative efforts in data acquisition is further evidenced in this passage from the Legislative Budget Brief of the Utah Legislative Fiscal Analyst Office: "The Automated Geographic Reference Center is a true example of an 'enterprise resource.' Its equipment, software, data, and expertise are used across State government. It also works closely with local and Federal entities, leveraging State resources to gain valuable data held at other levels of government."

Utah's strategy for overcoming barriers to using GIS in emergency management mitigation planning, response, and recovery is to develop a community partnership between the local emergency planners, local GIS professionals, and the State. AGRC has partnered with the CIO's Office, the Division of Emergency Services, and Homeland Security (DES), to champion and facilitate the use of GIS in local emergency management planning. Typically, local emergency management coordinators in rural counties do not have GIS expertise and are unaware of GIS resources available in their area. To address this gap, the State involves local GIS professionals in emergency training exercises held throughout the state.

Also, introductory level GIS training is offered to each county for their emergency management coordinators. A team, including local GIS professionals and AGRC staff, presents the training, which is funded through the State's Homeland Security grant. The SGID also provides the platform for sharing data for public safety purposes. Statewide critical infrastructure data layers, developed by AGRC and DES, are available in the SGID. Sensitive data are available to local GIS staff through a secure site.

AGRC receives various grants and monies to enhance data and adherence to Federal data standards. For example, AGRC received a grant from the Federal Geographic Data

**Continued on next page**

Committee (FGDC) to develop metadata for all data layers in the database. Another grant assured that AGRC produced map services adhere to standards set by the Open GIS Consortium (OGC).

The State of Utah has five regional GIS user groups that work together on common goals and data standards. The Utah Geographic Information Council (UGIC) is a vehicle for the dissemination of knowledge throughout the state during an annual conference and other activities.

The Geographic Information Systems Advisory Council (GISAC) has the task of coordinating large data collection activities, developing statewide geospatial policy, and approving standards. This group includes representatives from local, State, and Federal agencies, as well as universities and the private sector.

AGRC works with other State agencies to produce Internet Mapping Services for public use. One such service displays air quality information for the Wasatch Front, an area corresponding to the largest population within the state.

Other efforts involve State agencies with a need to store sensitive data and provide it to specified user groups. The Antiquities Section of State History is responsible for the delineation of all archeological sites in Utah. AGRC, in a joint effort with the Antiquities Section, has developed an Internet Map Service Site for this purpose.

On the local level, AGRC works with all Utah counties to map rural roads, as well as the roads of each community. This data layer allows each county to develop a transportation network plan for a variety of State and local purposes. Typically, the counties coordinate the E911 efforts within their area. The Public Safety Answering Points (PSAPs) are funded through monthly phone fees collected by the State. One cent per cell phone per month is also dedicated to improving road centerline and address data for GIS needs of the PSAPS. This data is also used to inventory the "B"(county) and "C"(city) road systems to receive federal maintenance funds. This data is also used by the U. S. Census Bureau to modernize TIGER data used for the next decennial census.

Many Utah counties use GIS functionality to promote local recreational opportunities. AGRC works closely with these counties to provide an interactive map on the World Wide Web that offers a standard look and feel.

AGRC is able to provide these goods and services because of its enterprise approach to data collection, storage, and distribution. The State of Utah, working with its 29 counties, made an early commitment to standardize software and a shared clearinghouse for geospatial information. As each year passes the awareness of what a GIS system can do for decision-making becomes larger. AGRC will continue to lead the State of Utah in this effort to facilitate the use of GIS and provide a clearinghouse for knowledge and geospatial data.

*For more information contact Matt Peters via email at: mpeters@utah.gov or 801-538-3168 or Dennis Goreham via email at: dgoreham@utah.gov or 801-538-3163*

U.S. General Services Administration • Office of Citizen Services and Communications

NEWSLETTER

*Innovative Approaches to Using Geospatial Information • Issue 16 • August 2005*

This newsletter is available online at the Office of Intergovernmental Solutions Homepage at http://www.gsa.gov/intergov

# Geospatial Technology Used for Real World Challenges

*By Ivan DeLoatch, Executive Director, Federal Geographic Data Committee*

Governments worldwide are turning to geospatial information as a way to provide more efficient and effective services to their citizens. The articles included here demonstrate the breadth of ways that local, State, and Federal governments use Geographic Information Systems (GIS) for core management tasks and the mundane aspects of keeping a government running.

## In This Edition



**U.S. General Services Administration**
**Office of Citizen Services**
**and Communications**
**Office of Intergovernmental Solutions**

**Co-editors**

John Clark, James Mackison,
Darlene Meskell, Lisa Nelson

***Comments and Suggestions***

Your comments and suggestions are always welcome. Let us know if you find the information useful and what articles you like.
Send mail to: lisa.nelson@gsa.gov



At the US Geological Survey, we see geospatial resources as the centerpiece of government activity and we are changing the way we do business to better serve the needs of our partners, customers and stakeholders.

Recent studies indicate the prevalence of GIS among local governments and the recognition that the benefits outweigh the costs involved. For example, more than a thousand local governments participated in a survey on GIS use by Public Technology, Inc. (PTI) in 2003. The PTI survey, sponsored by the US Department of the Interior and the Geospatial One-Stop project, found that GIS has found an important niche in local government especially in communities over 100,000 in population. Key local government uses include public works, financial, public safety and economic development, according to the survey responses.

Of course, problems persist. The PTI survey identified funding and technical expertise as the greatest barriers to the use of GIS. A majority of local governments participating in the survey take advantage of intergovernmental cooperative programs to leverage their resources and expand their capability to take advantage of the benefits of the technology. Although not discussed in the PTI survey, the lack of a nationally recognized set of standards to facilitate information sharing is also cited as an obstacle.

At the new National Geospatial Programs Office (NGPO) of the US Geological Survey, we are taking these issues very seriously as we continue to realign our geospatial programs to better address the concerns we have heard from the State and local government community. The PTI study, a collaborative effort of PTI, the National League of Cities, the National Association of Counties and the International City/County Management Association, proposed that the Federal government take a leadership role in promoting GIS use through outreach programs and training for local government officials, accessing GIS tools and resources via the Internet, and promoting best practices. Over the past six months, members of the NGPO staff have been hosting listening sessions and multi-agency study teams, as well as attending conferences, to get input and support that will guide the transformation of

**Continued on next page**